

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listings of Claims:

1. (canceled)

2. (currently amended) A The composition of Claim 1, comprising:
a first component that exhibits a predetermined change in response to
radiation; and

a second component;

wherein upon curing of said composition portions of said first component bind
together portions of said second component to form an inhomogeneous material
having physical properties substantially determined by said second component,
wherein said second component comprises porous silica particles, and wherein said
first component is a minority component of said inhomogeneous material.

3. (currently amended) A The composition of Claim 1, comprising:

a first component that exhibits a predetermined change in response to
radiation; and

a second component;

wherein upon curing of said composition portions of said first component bind
together portions of said second component to form an inhomogeneous material
having physical properties substantially determined by said second component,
wherein said second component comprises porous silica particles, and wherein said
second component is a majority component of said inhomogeneous material.

4. (currently amended) A composition comprising:

a first component that exhibits provides a predetermined change in response
to radiation; and

a second component;

wherein upon curing of said composition portions of said first component bind
together portions of said second component to form an inhomogeneous material
having physical properties substantially determined by said second component,

wherein a ratio of a size of one of said portions of said second component to a size of one of said portions of said first component is greater than about 5.

5. (original) The composition of Claim 4, wherein said ratio is greater than about 10.

6. (currently amended) The composition of Claim 2 4, wherein said radiation includes ultraviolet light.

7. (currently amended) A The composition of Claim 2 comprising:
~~a first component that provides a predetermined response to radiation; and~~
~~a second component;~~

~~wherein upon curing of said composition portions of said first component bind together portions of said second component to form an inhomogeneous material having physical properties substantially determined by said second component,~~

~~wherein said predetermined change in response to radiation includes dissociation.~~

8. (currently amended) The composition of Claim 2 4, wherein said predetermined change in response to radiation includes polymerization.

9. (currently amended) A composition comprising:
a first component that provides a predetermined response to radiation; and
a second component;

wherein upon curing of said composition portions of said first component bind together portions of said second component to form an inhomogeneous material having physical properties substantially determined by said second component,

wherein said first component comprises a photosensitive derivative of a polyhedral oligomeric silsesquioxane.

10. (currently amended) A composition comprising:
a first component that provides a predetermined response to radiation; and
a second component;

wherein upon curing of said composition portions of said first component bind together portions of said second component to ~~for~~ form an inhomogeneous material having physical properties substantially determined by said second component,

wherein said first component comprises a methacrylate substituted polyhedral oligomeric silsesquioxane.

11. (canceled)

12. (currently amended) The composition of Claim 2 4, wherein said second component comprises silicalite particles.

13. (currently amended) The composition of Claim 2 4, further comprising a material that responds to light to initiate a polymerization reaction.

14. (currently amended) The composition of Claim 2 4, wherein said physical properties are macroscopic physical properties.

15. (currently amended) The composition of Claim 2 4, wherein said macroscopic physical properties include a dielectric constant of said inhomogeneous material.

16. (currently amended) The composition of Claim 2 4, wherein said inhomogeneous material has a dielectric constant less than about 2.6.

17-31. (canceled)

32. (currently amended) An ~~The~~ integrated circuit of Claim 29 comprising:

a metal layer; and

an insulating layer overlying said metal layer, said insulating layer comprising:

a first component that exhibits a predetermined change in response to radiation; and

a second component;

wherein upon curing of said composition portions of said first

component bind together portions of said second component to form an

inhomogeneous material having physical properties substantially determined

by said second component, wherein said second component comprises

porous silica particles, and wherein said predetermined change includes polymerization.

33. (currently amended) An ~~The~~ integrated circuit of ~~Claim 29~~ comprising:
a metal layer; and
an insulating layer overlying said metal layer, said insulating layer
comprising:

a first component that exhibits a predetermined change in response to radiation; and

a second component;

wherein upon curing of said composition portions of said first component bind together portions of said second component to form an inhomogeneous material having physical properties substantially determined by said second component, wherein said second component comprises porous silica particles, and wherein said first component comprises a photosensitive derivative of a polyhedral oligomeric silsesquioxane.

34. (currently amended) An ~~The~~ integrated circuit of ~~Claim 29~~ comprising:
a metal layer; and
an insulating layer overlying said metal layer, said insulating layer
comprising:

a first component that exhibits a predetermined change in response to radiation; and

a second component;

wherein upon curing of said composition portions of said first component bind together portions of said second component to form an inhomogeneous material having physical properties substantially determined by said second component, wherein said second component comprises porous silica particles, and wherein said first component comprises a methacrylate substituted polyhedral oligomeric silsesquioxane.

35. (currently amended) An ~~The~~ integrated circuit of ~~Claim 29~~ comprising:
a metal layer; and

an insulating layer overlying said metal layer, said insulating layer comprising:

a first component that exhibits a predetermined change in response to radiation; and

a second component;

wherein upon curing of said composition portions of said first component bind together portions of said second component to form an inhomogeneous material having physical properties substantially determined by said second component, wherein said second component comprises porous silica particles, and wherein said second component comprises silicalite particles.

36. (currently amended) The integrated circuit of Claim 35 29 wherein said metal layer and said insulating layer are part of a dual damascene structure.

37. (currently amended) The integrated circuit of Claim 35 29 wherein said metal layer comprises is copper.

38. (currently amended) The integrated circuit of Claim 35 29 comprising a barrier layer between said metal layer and said insulating layer.

39. (currently amended) The integrated circuit of Claim 38 wherein said barrier layer comprises a material selected from the group consisting of silicon nitride, silicon oxynitride and silicon carbide.

40. (currently amended) The integrated circuit of Claim 35 29 wherein said insulating layer has a dielectric constant in range of about 2.2 to about 2.6.